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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/519,354	09/22/2005	Adalbert Huber	MERCK-2968	3006
23599 7590 02/05/2009 MILLEN, WHITE, ZELANO & BRANIGAN, P.C. 2200 CLARENDON BLVD. SUITE 1400 ARLINGTON, VA 22201				
EXAMINER				
WEDDLE, ALEXANDER MARION				
ART UNIT		PAPER NUMBER		
1792				
MAIL DATE		DELIVERY MODE		
02/05/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/519,354

**Applicant(s)**

HUBER, ADALBERT

**Examiner**

ALEXANDER WEDDLE

**Art Unit**

1792

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 November 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/US)  
Paper No(s)/Mail Date 11/12/2008
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments with respect to claims 1-11 have been considered but are moot in view of the new ground(s) of rejection necessitated by amendments to the claims.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 17 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The first four lines of the claim are unclear as shortening the curing time by about 10-60% of the drying time **without** the addition of the semiconductor materials and then reciting a step of "adding to the surface-coating" particulate semiconductor materials, which constitutes an indefinite subject matter. Examiner suggests reciting in claim 17, ---A method for shortening the curing and/or drying time of a surface-coating layer or printing ink, comprising adding to the surface-coating layer or the printing ink one or more pale or transparent particulate semiconductor materials or one or more particulate substrates coated with one or more pale or transparent semiconductor materials to shorten the curing and/or drying time of the surface-coating layer or printing ink by about 10-60% in comparison to the curing and/ or drying time of the surface-coating layer or printing ink without the one or more

pale or transparent particulate semiconductor materials or one or more particulate substrates coated with one or more pale or transparent semiconductor materials.---

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-13, 15-17, and 19-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Faris (US PG-PUB 2005/0236603).

Regarding Claims 1, 3-6, and 8, Faris (US'603) teaches a method of making transparent conductive ink comprising the step of adding ("mixing") pale or transparent particulate semiconductor materials, including indium tin oxide, zinc oxide, doped zinc oxide, and doped tin oxide in flake-form (pars. 0026-0028). The step of adding such materials to a surface-coating layer or printing ink would have produced the result of drying or curing the surface-coating layer or printing ink as an outcome.

Regarding Claim 2, US'603 teaches that the one or more pale or transparent semiconductor materials are homogeneous in structure (pars. 0029 – 0031, 0038; Claims 17, 20, 21).

Regarding Claim 7, Claim 1 recites "... pale or transparent [] materials **or** one or more particulate substrates . . .", and the language of Claim 7 does not require substrates coated with the semiconductor materials; claim 7 implies only that if a substrate were required, it would be selected from the group consisting of ..." US'603 teaches that a substrate for metal oxide semiconductor is silicon [di]oxide flakes (par. 0006).

Regarding Claim 9, the semiconductor of US'603 is an element either of a set of amorphous (or noncrystalline) semiconductors or of a set of crystalline semiconductors, since these are complementary sets.

Regarding Claim 13, US'603 teaches a step of "normal room temperature drying of ink based applications" which clearly envisions drying the surface coating layer or the printing ink in air (pars. 0019, 0033, 0054).

Regarding Claims 15-16, US'603 teaches that drying is achieved for a surface-coating layer or a printing ink (par. 0054).

Regarding Claim 17, US'603 teaches a method comprising adding to printing ink one or more pale or transparent particulate materials (pars. 0026-0028). The step of adding such materials to a surface-coating layer or printing ink would have produced the result of drying or curing the surface-coating layer or printing ink.

Regarding Claim 19, US'603 teaches that a surface-coating layer is achieved (pars. 0054-0058).

Regarding Claim 20, US'603 teaches that drying of a printing ink is achieved (par. 0054).

Regarding Claim 10, US'603 teaches a composition comprising one or more pale or transparent particulate semiconductor materials (pars. 0026-0028). The composition as claimed would have acted as a drying agent.

Regarding Claim 11, US'603 teaches a printing ink composition comprising one or more pale or transparent particulate semiconductor materials, such as ZnO or indium tin oxide (pars. 0026-0028). The composition as claimed would have acted as a drying agent.

Regarding Claim 12, US'603 teaches a composition consisting essentially of particulate substrates coated with pale or transparent semiconductor materials (0026-0029). The composition as claimed would have acted as a drying agent.

US'603 expressly or inherently discloses every limitation of Claims 1-13, 15-17 and 19-20.

6. Claims 17 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Yukinobu et al. (US 5,411,792).

Regarding Claim 17, Yukinobu et al. (US'792) teach a method of forming a surface-coating layer ("overcoat") comprising the step of adding to the surface-coating layer one or more pale or transparent particulate semiconductor materials ("ITO") (col. 2, lines 21-35; col. 5, lines 14-20). The step of adding such materials to a surface-coating layer or printing ink would have produced the result of drying or curing the surface-coating layer or printing ink.

Regarding Claim 18, US'792 teaches that the surface-coating layer cures by IR radiation (Fifteenth embodiment, col. 13, lines 23-29; Twenty-third embodiment, col. 16, lines 57-68).

US'792 expressly or inherently discloses every limitation of Claims 17-18.

7. Claims 1 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Elfenthal et al. (US 5,215,580).

Regarding Claims 1 and 14, Elfenthal et al. (US'580) teach a process of producing a transparent metal oxide pigment for automobile paint coatings (col. 1, lines 6-13 and 35-46) comprising a step of adding to the surface-coating layer one or more pale or transparent particulate semiconductor materials (Abstract; col. 1, lines 18-22). The step of adding such materials to a surface-coating layer or printing ink would have produced the result of drying or curing the surface-coating layer or printing ink.

US'580 expressly or inherently discloses every limitation of Claims 1 and 14.

### ***Conclusion***

8. No Claim is allowed.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALEXANDER WEDDLE whose telephone number is (571) 270-5346. The examiner can normally be reached on Monday-Thursday, 7:30 AM - 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Kornakov can be reached on (571)272-1303. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



/A. W./  
Examiner, Art Unit 1792/Michael Kornakov/  
Supervisory Patent Examiner, Art Unit 1792